REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claim 3 is currently being amended.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-9 are now pending in this application.

Claim 3 has been amended to correct a misspelling without narrowing its scope. No new matter has been added.

Allowable subject matter

Applicants appreciate the indication that claim 7 is allowed.

Rejection under 35 U.S.C. § 102

Claims 1-6 and 8-9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,713,197 to Ogawa et al. ("Ogawa"). Applicants respectfully traverse this rejection for at least the following reasons.

Claim 1 is directed to an exhaust gas purifying system, which comprises a control unit programmed to carry out "detecting an activity transition time at which the exhaust gas purifying catalyst changes from an inactive state to an active state, in accordance with the concentration of the exhaust gas component detected by the concentration sensor," and "judging a deterioration of the exhaust gas purifying catalyst at the activity transition time." Thus, the control unit of the claim 1 system detects an activity transition time in accordance with a detected concentration of exhaust gas component, and then judges a deterioration of the exhaust gas purifying catalyst at the activity transition time. Ogawa fails to disclose the control unit programmed as recited in claim 1, nor the advantages attendant thereto.

Ogawa discloses a catalyst deterioration detection system including an electronic control unit (ECU) 5, a catalyst 15, and an O2 sensor 17 downstream of the sensor (Fig. 1, col. 5, lines 18-36). Ogawa also discloses a catalyst deterioration detection procedure in Figure 6. When it is judged that the engine is warmed up and the catalyst bed temperature is higher than a lower limit, the catalyst 15 is determined to be activated (col. 12, lines 36-43). If further engine operating conditions are then satisfied, the catalyst deterioration detection routine of Figure 7 is executed (col. 12, lines 43-64). The determination of the deterioration of the catalyst depends in part on the output value VO2 from the O2 sensor 17 (See Fig. 7).

Ogawa, however, fails to disclose detecting an activity transition time in accordance with a detected concentration of exhaust gas component, and then judging a deterioration of the exhaust gas purifying catalyst at the activity transition time as in claim 1. Ogawa discloses that the catalyst is active when it is judged that the engine is warmed up and the catalyst bed temperature is higher than a lower limit. Ogawa does not disclose detecting that the catalyst is active in accordance with a detected concentration of exhaust gas component. Thus, Ogawa fails to disclose features of claim 1.

Moreover, Ogawa fails to realize the advantages of the system as recited in claim 1. The system of claim 1 is an improvement over systems which determine that a catalyst is deteriorated based on the concentration of an exhaust gas component from the catalyst (See instant specification, page 3, lines 16-29). The system as recited in claim 1 judges the deterioration of the exhaust gas purifying catalyst at the activity transition time, where the activity transition time is detected based on a detected concentration of exhaust gas component. Because the exhaust gas component, such as NOx for example, concentration detected will be significantly different when the catalyst is active as compared to when it is inactive, the activity transition time can be accurately detected even when using a concentration sensor which is relatively inexpensive and has a relatively low detection accuracy (See instant specification, page 24, lines 26-31). The system of Ogawa, failing to disclose determining the activity transition based on a detected concentration of an exhaust component, and then judging the deterioration of the catalyst at the determined activity transition time, fails to realize these advantages, (i.e., more accurate detection even with relatively inexpensive sensors).

Independent claims 8 and 9 are also believed to be allowable for at least the same reasons discussed about with respect to claim 1. Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date January 24, 2005 By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5414
Facsimile: (202) 672-5399

Richard L. Schwaab
Attorney for Applicant
Registration No. 25,479

Thomas G. Bilodeau
Attorney for Applicant
Registration No. 43,438